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ABSTRACT

Designed for students in grades 7 through 12, the paper presents illustrative resource materials for teaching concepts related to geographic regions. Emphasis is on giving students an understanding of the interrelationship between regional characteristics and human behavior. The paper introduces students to the following notions: environmental determinism, possibilism, stop-and-go determinism, culture, myth, technology, environmental perception, and sequent occupance. Desired responses and learning outcomes are followed by definitions of the above notions. Examples are used to illustrate the notion that our ruling ideas shape our behavior and the way we interact with both our natural and social environment. Three figures are provided, presenting: (1) the natural regions from the North Pole to the Equator; (2) natural regions and their possibilities for humans; and (3) geographic succession. Students using Figures 1 and 2 might be asked to indicate the economic possibilities available to humans in each of the various natural regions. Students using Figure 3 might be asked to summarize the logical order of influence according to the direction of arrows indicated on the chart. The paper concludes that the essence of geography instruction lies in the study of the relationships existing in a given geographical region. (LH)

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Threading One's Way Through the Geographic Region

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On the basis of previous work, students understand a *region* to be an area of the earth's surface that is more or less uniform in one or more ways so as to distinguish it from surrounding areas. They have also discovered that a *natural region* is a *multi-factor* region in which the regional characteristics are determined by nature rather than by humans.

Before fully introducing humans into the regional picture, expose students to certain notions: *environmental determinism*, *possibilism*, *stop-and-go determinism*, *culture*, *Myth*, *technology*, *environmental perception*, and *sequent occupance*.

All of these notions can be developed through Socratic questioning. Starting with *environmental determinism*, one possible line of questioning might proceed thus:

Sample questions

Q1. Johnny, what *determines*:
- a. the character of the soil in the Canadian Prairies?
- b. the amount of rain that Vancouver receives each year?
- c. the height of Douglas fir trees?

Q2. Susan, what *determined*:
- a. your wearing a sweater to class today?
- b. your eating porridge for breakfast?
- c. your father's driving a Chev instead of a Ford?

Q3. a. Robert, in what situations is it correct to speak of something's being determined by environmental factors (*environmental determinism*)?
- b. In what circumstances is it *incorrect* to speak of environmental determinism?
- c. why is the distinction important?

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Desired responses and learning outcomes

It is correct to speak of one natural element's being determined by another (in the absence of human agency). A plant or boulder does not choose its location, and it is acted on by various natural agencies.

Human behavior, on the other hand, is *not determined* by natural environmental factors. Rather human behavior may be *influenced* by natural forces. Such influence is direct—as in the case of killing natural catastrophes: earthquake, volcanic eruption, or flood. More often, the influence of nature is *indirect*. Humans can *adapt* to a given natural context in a variety of ways. That is to say, the environment provides a range of *possibilities* for human consideration. The actual possibilities utilized are shaped by human culture, technology, and personal tastes, since they influence what may and may not enter one's perceptual field of desirable possibilities.

Definitions

Environmental determinism—the view that nature determines the ways humans may use the environment.

Possibilism—the view that the environment provides a range of possibilities from which humans can choose responses consistent with their culture.

Stop-and-go determinism—the view that human freedom of choice is more theoretical than real. For example, in theory, bananas could be grown in greenhouses in Antarctica. In practice, the costs of doing so would be so prohibitive as effectively to deny the possibility.

This argument overlooks the fact of interacting regions, which makes trade possible. Seasonal settlers in Antarctica can import bananas (as some have done) from a warmer climate.

Culture—way of life: the collective/traditional values, attitudes, perceptions and choice preferences of a group of people.

Myth—the fundamental rationale that a society employs for justifying itself, its culture, and what it does or doesn't do to nature and other societies. Note that Myth ≠ myth. The term is not pejorative but simply indicates that the Myth as *ultimate value* of a person or society is not provable. It just *is* and shapes behavior in the same way that a person's behavior might be shaped by strongly held (but unprovable) religious belief. Myths cannot be judged directly, but the consequences of adhering to them certainly can be examined. It is in the latter sense that one can speak of positive and negative values.

Technology—the tools and know-how available to a culture for coping with its environment.

Environmental perception—the view that humans act not on the basis of "what is," but on the basis of what they perceive to be the case. In other words, a resource is not a resource until it is perceived as such. For example, uranium has existed in Canada for geological ages, but the Amerinds did not perceive it to be an energy resource, as we do today. In any case, the Amerinds did not have the necessary technology that would have shaped their perceptions accordingly.

Sequent occupance—the succession of cultures *over time* that may occur in the same area. An example is the displacement of buffalo-hunting in the Great Plains of North America by grain-farming. The notion of sequent occupance *ipso facto* challenges the notion of environmental determinism.

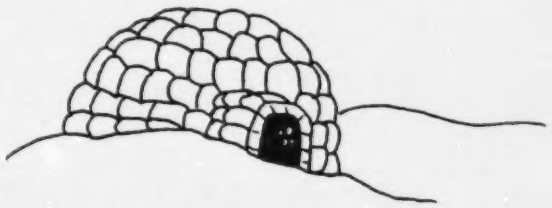
So what?

The discussion of the foregoing notions is important because our ruling ideas shape our behavior and the way we interact with both our natural and our social environment. Some ideas are more maladaptive than others. For example, the view, sanctified by some religions that humankind is *apart from* nature rather than *a part of* nature has led to an unconscionable exploitation of the "lower" natural kingdoms with grave attendant ecological damage.

A denial of the notion of *possibilism* has led some cultures to believe that they were somehow superior and justified in "ripping off" other cultures and their resources. For example, it is commonplace to bemoan India's population explosion; yet one additional birth in North America will consume more than 100 times the resources required by a new birth in India.

Environments do differ in the absolute number of possibilities available for human life. The land of the Eskimo offers scanty possibilities indeed. Nevertheless people living in lush environments often believe themselves to be superior to those not so fortunately endowed with the bounties of nature.

Political outlook tends to reflect the abundance or paucity of possibilities for sustaining human life at an acceptable qualitative level. Difficult environments tend to elicit *collectivistic* responses from a culture. The Eskimos, for example, are pure communists. Fennoscandia and the Soviet Union are harsh regions. Their outlook is socialistic. *Individualism* does not thrive in harsh environments. On the other hand, few nations enjoy the natural bounties of the U.S.A. at the same favorable population density. Collective effort is not a prerequisite for survival; so free-enterprise individualism flourishes.



Real problems arise when a culture that considers itself well-adapted to its own environmental context regards its way of life as a cultural imperative for the rest of the world. Thus we have the implacable tension between the U.S.A. and the U.S.S.R.—each intent on moulding the world in its own image.

Problem-solving by changing perception of resources

Food shortages often occur because of a willful denial of other food possibilities by a culture.

For example, the Paris basin is a major wheat-producing region. It would fare even better as a rye-producing region, except that Parisians consider rye as fit only for pig-food.

The Japanese eat canned grasshoppers; but Canadian prairie farmers still regard a cloud of grasshoppers as a plague rather than as a bumper grasshopper crop. A lot of protein goes to waste when a potential solution is wrongly seen as a problem.

Exploring possibilities

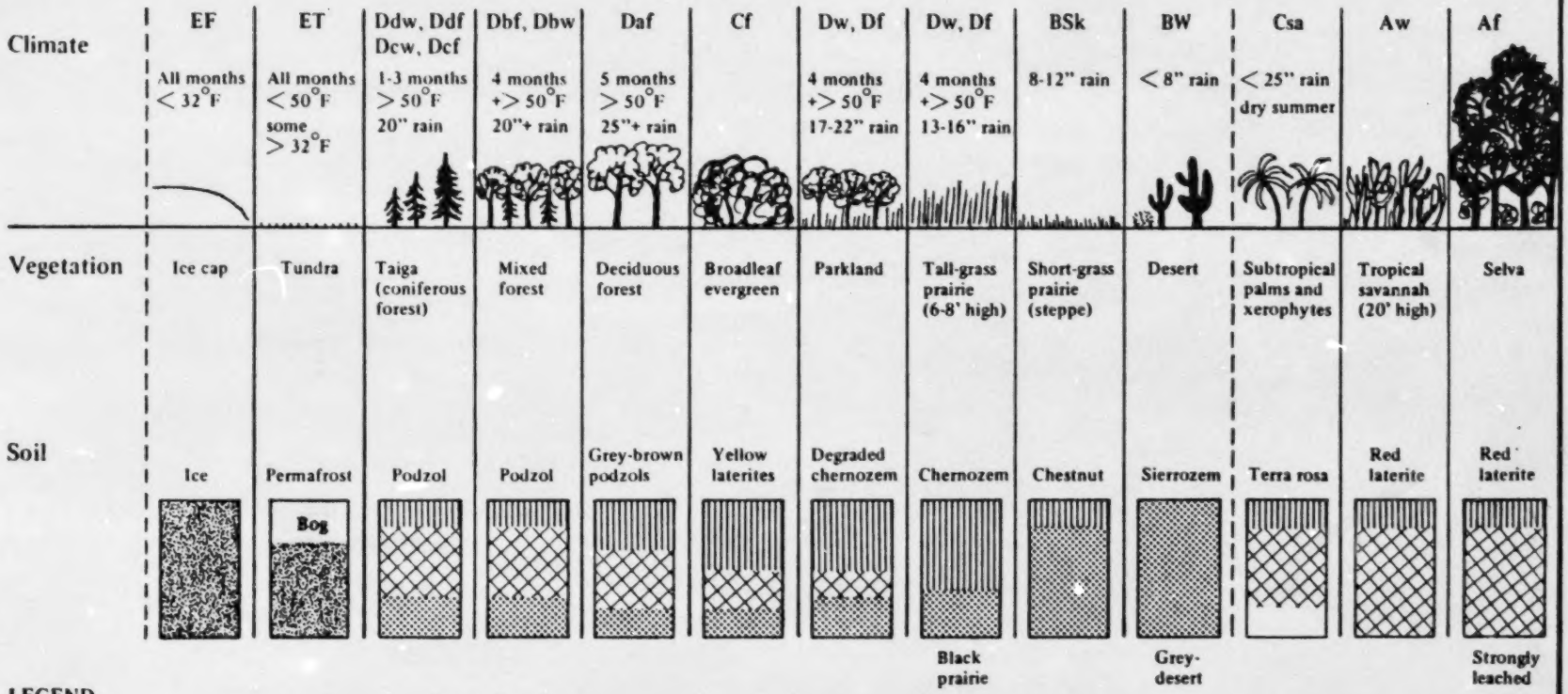
Figure 1 schematically represents *natural regions* that would occur on a cross-section from the North Pole to the equator. The line of cross-section meanders somewhat to allow for variations in precipitation. The temperature zone, however, are still basically latitudinal. The idea of the diagram is more important than the details; teachers will wish to make modifications. For example, The Köppen letters might be retained for senior classes but removed for classes below Grade 11.

Application

Given Figure 1 (or after students have built up a similar diagram of their own), students might be asked to indicate the economic possibilities available to humans in each of the various natural regions. (Natural regions are named after their *vegetation*-type—*tundra, taiga,* and so forth.) The guesstimates could then be compared with the economic utilization actually in effect as determined from an economic atlas, or the global agricultural and resource maps in the *Canadian Oxford School Atlas*. A third wrinkle might be to have students suppose how a given culture, for example, the modern Japanese, might *perceive* the possibilities of the various natural regions.

Figure 1

Natural Regions—North Pole to Equator



The overall understandings might be tabled as follows:

NATURAL REGIONS: THEIR POSSIBILITIES FOR HUMANS

FIGURE 2

Natural region	How I would use it	How it is actually used	How Japanese might use it
Ice cap	?	Not used except for scientific observations	Source of ice floes for fresh water to sell to Middle East in exchange for oil
Tundra	Natural park	Reindeer herding, e.g., Lapps	Disposal of industrial waste
Sel	Make jungle movies	Shifting cultivation, e.g., Boro	Intensive forestry; conversion of wood cellulose to digestible form for human and animal food

Student suppositions may be colorful and imaginative. That tendency should not be discouraged, as it will provide a springboard for cross comments by classmates.

Geographic succession

A *geographic region* is a multi-factor region that is determined by both natural and artificial factors. Humans may consciously or unconsciously have a determining effect on the natural landscape; but humans' cultural landscape cannot be said to be determined by natural factors. At the same time, humans can ignore natural factors only at their peril. Geographic regions are very complex. We can deal more readily with such complexity if we bear in mind that nature is passive and that humans are active. Nature sets the stage for human activities. Humans can direct the drama pertaining to their lives within the limits of the stage setting.

Figure 3 is one way of summarizing the interaction between humans and their environment. It shows a *logical order of influence* according to the direction of arrows. Thus *latitude* not only expresses location; it also expresses indirectly the intensity of solar radiation (insolation) received at a given location, thus helping to shape climate. Latitude affects climate, but climate does not affect latitude. *Geological structure* includes terrain, topography, and the patterns of land and water. Clearly *geological structure* and *latitude* are the two dominant determiners of climate. Similarly terrain (geological structure) and climate conjointly determine drainage patterns, while drainage only slightly modifies geological structure.

Once the physical elements have been dealt with, determination becomes *influence*. Thus a navigable river intersecting another river (drainage) in an area of fertile soil (*agriculture*) is favorable for the development of a nodal point (*community centre*). If *mineral* deposits be available nearby, *industry* may also be possible. A prosperous town, having a diversified economic base in a commanding location is apt to become a centre of political influence (*polity*).

Caution: Senior students who study a region can readily utilize this logical regional catalogue-approach. Many textbooks when dealing with a country begin with position, extent, space relations, then proceed to land forms, climate, vegetation agriculture, population, and so forth. Figure 3 expresses the reasons for that order.

With junior classes, it is inadvisable to start at square one. It is better to consider effects before causes. Therefore one might begin with a consideration of human activities and then explain these backwards with reference to factors in the physical stage.

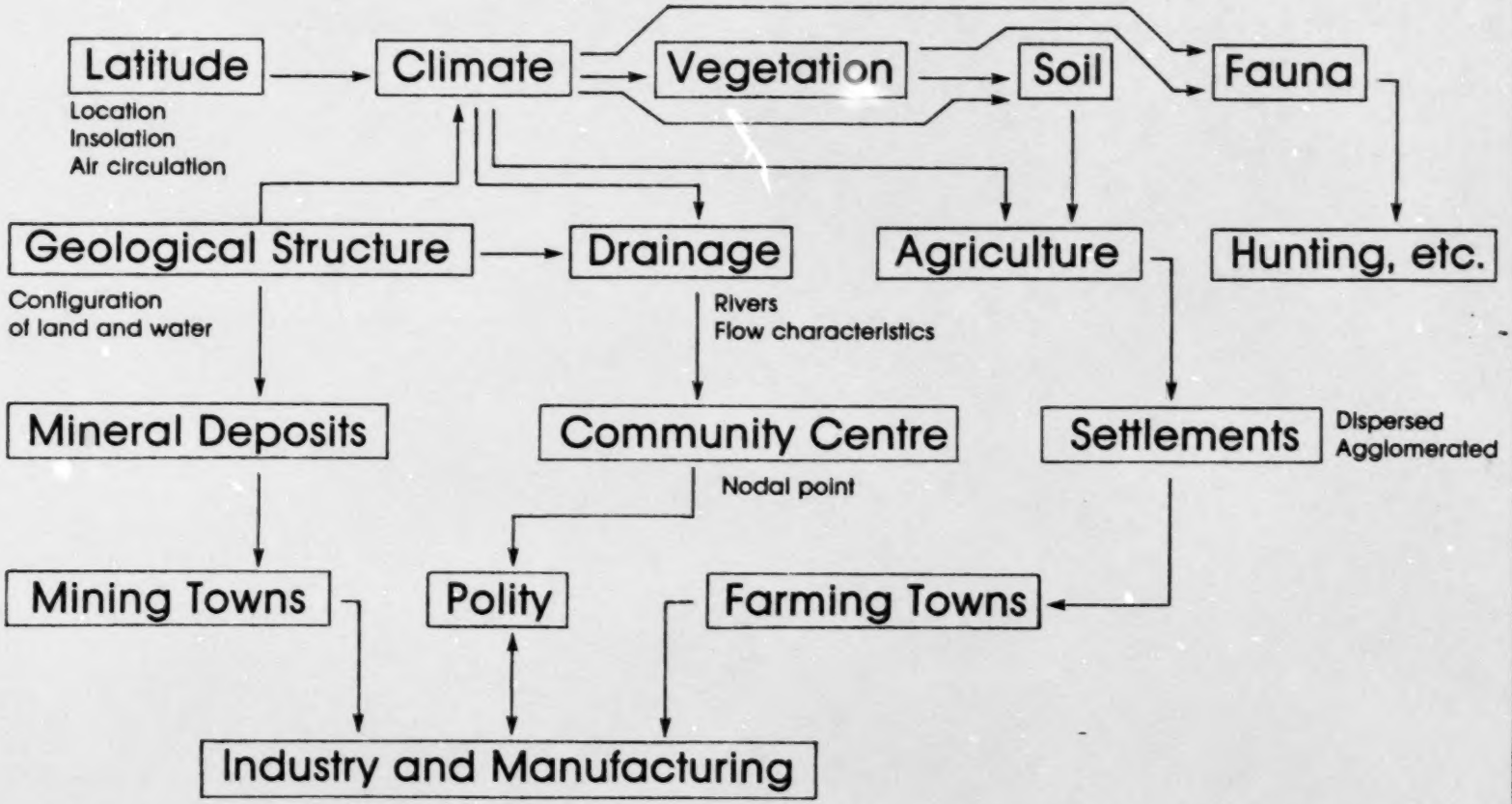
An invariably safe introduction to a region for junior classes would be:

Q1. Where are the people?
Q2. What do they do?
Q3. *Why?*

Figure 3

Geographic Succession

Best order for studying how things hang together in space



To reiterate, young children are not interested in abstractions. They are more interested in people than in things or ideas. It is best to meet students where they are. In essence, one can begin at any box in Figure 3 that is appropriate to the interests of the class and eventually thread one's way to only those other boxes that have bearing on the issues at hand. The connections must be made because that's what geography is all about–the study of relationships in a given area–or "how things hang together in space."